

## **ELECTRO-OPTICAL DEVICES FROM POLYMER-STABILIZED LIQUID CRYSTAL MOLECULES**

### **Abstract of the Disclosure**

An electro-optic device includes a liquid crystal cell (10, 10') and at least  
5 one electrode (40, 42, 40', 42') arranged to selectively electrically bias the liquid crystal  
cell (10, 10'). A chiral or cholesteric liquid crystal (30, 30') is disposed in the liquid  
crystal cell (10, 10'). The liquid crystal (10, 10') has an optic axis substantially along a  
selected optic axis direction in the absence of an electrical bias. A polymeric network  
(32, 32', 72) is disposed at an inside surface of the liquid crystal cell (10, 10'). The  
10 polymeric network (32, 32', 72) extends partway into the liquid crystal cell (10, 10')  
leaving at least a portion of the liquid crystal cell (10, 10') substantially free of the  
polymeric network (32, 32', 72).